Exhibit 2

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Published

With international search report.

(54) Title: GENETICALLY MODIFIED TUMOR-TARGÉTED BACTERIA WITH REDUCED VIRULENCE

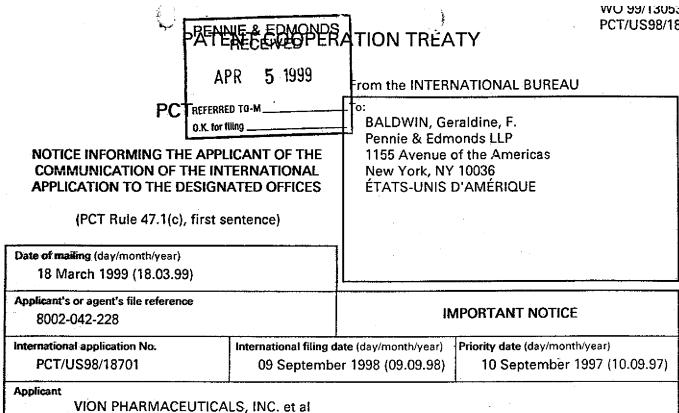
(57) Abstract

The present invention is directed to mutant Salmonella sp. having a genetically modified msbB gene in which the mutant Salmonella is capable of targeting solid tumors. The invention is also directed to Salmonella sp. containing a genetically modified msbB gene as well as a genetic modification in a biosynthetic pathway gene such as the purI gene. The present invention further relates to the therapeutic use of the mutant Salmonella for growth inhibition and/or reduction in volume of solid tumors.

INTERNATIONAL SEARCH REPORT

International application No. PCT/US98/18701

A. CLASSIFICATION OF SUBJECT MATTER			
IPC(6) :C12N 1/20; A61K 38/14; A01N 37/18 US CL : 435/252.8; 530/322; 514/2+			
According to International Patent Classification (IPC) or to both national classification and IPC			
B. FIELDS SEARCHED			
Minimum documentation searched (classification system followed by classification symbols)			
U.S. : 435/252.8; 530/322; 514/2+			
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched			
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) APS, MEDLINE, CAPLUS, STN			
C DOCUMENTS CONSIDERED TO BE RELEVANT			
Category*	cy* Citation of document, with indication, where appropriate, of the relevant passages		Relevant to claim No.
X	WO 97/18837 A1 (UNIVERSITY OF MARYLAND AT BALTIMORE), 29 May 1997, see pages 24, 25 and entire document.		1, 3-14, 31
Y			17-27, 29, 30, 32, 36, 37.
X	melanoma Vector. Melanoma Research, 4th World Conference on		15, 16, 28
Y			17-27, 29, 30, 32
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Further documents are listed in the continuation of Box C. See patent family annex.			
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the priority date claimed		*&* document member of the same patent	family
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Washington, D.C. 20231			
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in accordance with Rule 47.1(c), third sentence, those Offices will accept the present Notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:

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3. Enclosed with this Notice is a copy of the international application as published by the International Bureau on 18 March 1999 (18.03.99) under No. WO 99/13053

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If the applicant wishes to postpone entry into the national phase until 30 months (or later in some Offices) from the priority date, a demand for international preliminary examination must be filed with the competent International Preliminary Examining Authority before the expiration of 19 months from the priority date.

It is the applicant's sole responsibility to monitor the 19-month time limit.

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

REMINDER REGARDING ENTRY INTO THE NATIONAL PHASE (Article 22 or 39(1))

If the applicant wishes to proceed with the international application in the national phase, he must, within 20 months or 30 months, or later in some Offices, perform the acts referred to therein before each designated or elected Office.

For further important information on the time limits and acts to be performed for entering the national phase, see the Annex to Form PCT/IB/301 (Notification of Receipt of Record Copy) and Volume II of the PCT Applicant's Guide.

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